### Quiz 20: 4/1/15

A system has 8 virtual pages and 4 page frames. The pages are accessed in the following order.

Draw a table showing what each of the 4 page frames should have in it and when the page faults occure for

- First In First Out (FIFO)
- Clock Algorithm
- Least Recently Used (LRU)

#### **ANSWERS**

## First In First Out (FIFO)

Page	1	2	4	2	3	1	5	2	6	8	3	5	4	1	2	6
0	1	1	1	1	1	1	5	5	5	5	5	5	5	1	1	1
1	-	<b>2</b>	2	2	2	2	2	2	6	6	6	6	6	6	<b>2</b>	2
2	-	-	4	4	4	4	4	4	4	8	8	8	8	8	8	6
3	-	-	-	-	3	3	3	3	3	3	3	3	4	4	4	4
Faults	F	F	F	-	F	-	F	-	F	F	-	-	F	F	F	$\mathbf{F}$

# **Clock Algorithm**

Page	1	2	4	2	3	1	5	2	6	8	3	5	4	1	2	6
0	1	1	1	1	1	1	1	1	6	6	6	5	5	5	5	6
1	-	<b>2</b>	2	2	2	2	2	2	2	2	2	2	4	4	4	4
2	-	-	4	4	4	4	5	5	5	8	8	8	8	1	1	1
3	-	-	-	-	3	3	3	3	3	3	3	3	3	3	<b>2</b>	2
Faults	$\mathbf{F}$	F	F	-	F	-	F	-	$\mathbf{F}$	$\mathbf{F}$	-	F	$\mathbf{F}$	F	F	$\mathbf{F}$

# Least Recently Used (LRU)

Page	1	2	4	2	3	1	5	2	6	8	3	5	4	1	2	6
0	1	1	1	1	1	1	1	1	1	8	8	8	8	1	1	1
1	-	<b>2</b>	2	2	2	2	2	2	2	2	2	5	5	5	5	6
2	-	-	4	4	4	4	5	5	5	5	3	3	3	3	<b>2</b>	2
3	-	-	-	-	3	3	3	3	6	6	6	6	4	4	4	4
Faults	$\mathbf{F}$	$\mathbf{F}$	$\mathbf{F}$	-	$\mathbf{F}$	-	$\mathbf{F}$	-	$\mathbf{F}$	F						